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WEAKNESSES AND ACHIEVEMENTS IN SOVIET MACHINE TOOL BUILDING

ACCUMULATE ABOVE-NORM STOCKS -- Moscow, Finansy i Kredit SSSR, Aug 53

Because of a slow rate of capital turnover and other technical and economic shortcomings, machine building enterprises had accumulated at the beginning of 1953 above-norm stocks of commodities and materials which had not been credited by the bank. At machine tool building enterprises, for example, commodity and material assets were 14 percent above the norm.

SUGGEST MEASURES FOR IMPROVING MACHINE TOOL WAYS -- Moscow, Stanki i Instrument, Nov 53

Experience in using and repairing lathes and boring machines has shown that there are shortcomings in the design of the ways of a number of machine tools. The elimination of these shortcomings would considerably improve the quality of the machine tools and decrease the labor consumed in their repair.

Among these shortcomings are: (1) the low hardness of the ways, (2) the absence of bed guards for protecting the front way of Models 1D63A and DIP-500 lathes, and (3) the impractical design of the slides for quick and convenient repair.

Under intensive work, the graduation lines on the ways (in the zone of frequent slide travel) of Model 1D62 lathes produced in 1952 wore off after 1½ months of operation. In this same length of time, the front way of Model 1D63A lathes produced in 1952 became scored because of the absence of bed guards.

Although the Model 2620S boring machine was provided with bed guards, the bed ways in the zone of frequent table travel were covered with numerous scorings after the machine had been in operation one year. The guards on this machine tool encumbered the inspection and lubrication of the ways. The spindle-head ways on this machine tool were also badly worn.

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To eliminate shortcomings in design and repair methods, the following measures must be taken:

1. The hardening of lathe and boring machine ways must be introduced.

2. Guards for protecting the front bed way of Models 1D63A and DIP-500 lathes and for protecting the front part of tailstock ways of all lathes must be introduced.

3. Replaceable superimposed ways must be incorporated in the slide design of new machine tools so that only these ways will need replacement and the slide itself will not have to be repaired.

4. The centralized production of attachments for grinding ways must be organized. -- Ye. Ye. Krupitskiy

USE INTERCHANGEABLE TOOLING EQUIPMENT FOR GREATER ACCURACY -- Moscow, Stanki i Instrument, Oct 53

The machine tool building industry has made provisions for the perfection of new types of precision machine tools. Besides increasing the output of these machine tools, Soviet machine builders are successfully increasing the accuracy, by technological means, of series-produced equipment of normal accuracy.

This work is being directed toward:

1. Increasing accuracy and stability in the operation of existing equipment by modernizing the equipment;

2. Increasing accuracy in the technological process by improved tooling and greater stability in the machine-part sizes, and decreasing setup time by the use of interchangeable designs of cutting tools and attachments;

3. Increasing accuracy and stability in the technological process by using devices on the machine tool which automatically compensate for wear.

The present article is devoted to the results of experimental research and application of various designs of interchangeable tooling equipment on automatic and semiautomatic lathes. These lathes include Models MR-5, 114, 1261P, 128, 1730, etc.

The ever broadening introduction of these designs into production is making it possible to use new, progressive methods of machine tool setup for accuracy, to assure a sharp decrease in variations from specifications of machine-part sizes and time spent in changing and adjusting cutting tools, and to increase machine tool productivity. -- A. V. Derbisher

NEW 600-TON LATHE -- Petrozavodsk, Leninskoye Znamya, 3 Dec 53

On 1 December, a new 600-ton lathe in the No 5 assembly shop of the Kramatorsk Heavy Machine Tool Building Plant was approved by the Division of Technical Control after plant testing. It is driven by many powerful electric motors and is automatically controlled by push buttons. Large machine parts several tons in weight will be machined on this lathe.

DEVELOP NEW LATHE -- Moscow, Vechernyaya Moskva, 5 Dec 53

The Moscow Krasnyy Proletariy Plant has developed a new high-production semiautomatic lathe of the continuous action type. Six large parts, each up to 500 millimeters in diameter, can be machined on it at the same time. The design of the lathe permits inserting blanks and removing finished parts without stopping the machine tool.

GIVE LOCATIONS AND ACHIEVEMENTS OF LENINGRAD PLANTS -- Moscow, Izvestiya, 1 Dec 53

Flatcars loaded with new machine tools manufactured in November left Leningrad machine tool building plants on 30 November.

In the Vyborg Section (Vyborgskaya Storona) of Leningrad, where the Machine Tool Building Plant imeni Sverdlov is located, one flatcar contained boxes with parts for horizontal boring machines addressed to Moscow, the Urals, and Pskov.

The units and parts for a heavy boring machine more than 60 tons in weight were barely accommodated on five flatcars. It was destined for a compressor plant. This type of machine tool was also shipped to a locomotive building plant. Machine tools with the Leningrad trade-mark were transported on 15 flatcars.

According to director Koval'chuk, the plant successfully completed the November and 11-month programs. Besides the machine tools shipped on 30 November, the plant also produced in November several 45-ton metal-cutting machine tools for electric-power-equipment plants and heavy and transport machine building enterprises.

The plant also manufactured a special machine tool for boring frames of large machines. In productivity, the tool can replace four ordinary boring machines.

In 1953, the plant for the first time produced Model LR-9, a modernized diamond boring machine. This machine tool, which has high speeds, eliminates operations formerly performed on special grinding machines.

The plant is now preparing for the production of new heavy machine tools for machining parts of powerful turbines for the Kuybyshev GES. Each machine tool will weigh 150 tons.

In the Petrograd Section (Petrogradskaya Storona) of Leningrad, the Leningrad Automatics Plant shipped new machine tools manufactured in November to Moscow, Orel, Omsk, Sverdlovsk, Khar'kov, Batumi, Vyborg, and other cities in the USSR.

According to director P. D. Khizhnyak, the Automatics Plant completed the November and 11-month programs in all indexes. In 1953, the plant was the first in the USSR to manufacture the model of a precision automatic lathe. The plant will produce the first series of these machine tools in December.

The first series of drill-milling automatics for milling twist drills has been produced. In 1953, the plant has also manufactured a series of vertical cutting-off automatics and automatic lathes for cutting off tool blanks.

By 5 December, the plant will have completed the manufacture of its first precision turret lathe.

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The Leningrad Machine Tool Building Plant imeni Il'ich in Stalinskiy Rayon and other machine tool building plants in Leningrad also completed their November and 11-month plans on 30 November.

USE MODEL 571B GEAR SHAVING MACHINE AT TRACTOR PLANT -- Moscow, Stanki i Instrument, Oct 53

The Model 571B gear shaving machine, produced by the Khar'kov Light-Duty Unit-Type Machine Tool Plant /formerly translated as Light-Duty Combination Machine Tool Plant (Zavod Malykh Agregatnykh Stankov)/, is used at the Khar'kov Tractor Plant.

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